


How to Demystify IT for Your CEO

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Boiling the IT Frog:
How to Make Your Business Information Technology Wildly Successful Without Having to Learn Anything Technical



Technology versus Magic

- “Any sufficiently advanced technology is indistinguishable from magic.”
– Arthur C. Clarke
- In Magic, we expect
 - A mystical language
 - The impossible
- Therefore, we
 - Don't expect it to follow logic
 - Don't apply our common sense.


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Technology as Magic can get you in trouble

- Unreasonable trust
 - DEC MRP example: Order quantity calculation
- Illogical thinking prompted by computer systems
 - Best Buy example: exchanging a DVD
- The attraction of wizardry
 - Delta Airlines example: changing a ticket

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Gartner “Hype Cycle” Example



Source: Gartner “Understanding Gartner’s Hype Cycles, 2008” by Jackie Fenn and Alexander Lindel (June 2008)
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Two Different Aspects of “Magic”

1. “Magic” systems make people give up their common sense
2. Inflated expectations of new technology make people distrustful when they discover the reality of the technology

- Moral 1: Stay grounded and be skeptical. There is no real magic in IT.
- Moral 2: If the basic principles underlying a technology or system can be clearly explained to the users, then false expectations can be prevented.

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If IT isn't Magic, then what is it?

- Hint: It isn't about software, hardware, networks and systems

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IT is all about:

- Infrastructure,
- Projects,
- Maintenance,
- Strategy, and
- Trust

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Trust is the Most Important

- If your IT organization doesn't have a mutually trusting relationship with its users/customers,

then IT won't be successful,

no matter how successful you are with every other aspect of IT

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How IT Can Build Trust

- Clarify; simplify; use business language
- Under-promise and over-deliver
- Be consistent
- Think like your customers
- Communicate both good and bad news

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How Business Can Build Trust

- Focus on:
 - Results
 - Process changes you would like to achieve
- Suggest ideas on how to do something in IT, but recognize that they may not be applicable
- Don't over-specify an IT solution
- Motivate an IT organization by measuring its contribution to *business* success.

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Infrastructure Secret 1

- There is no "right" amount of money to spend on infrastructure
- What companies spend on hardware and software is directly related to
 - Risk
 - The depth of their pockets

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Infrastructure Secret 2

- The fewer Information Technology products you have, the better off you'll be, as long as you've chosen good products.

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Infrastructure Secret 3

- Almost any software and hardware will work in the short term, but you'll see the difference in the long term.
 - Difference appears in training cost, support cost, compatibility with other software and hardware, scalability to larger volumes, ease of integration with other software and hardware, and in the viability of the vendor

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Infrastructure Secret 4

- If you're going to use off-the-shelf software, then use the business processes that come with it.
 - Differentiate between a reason (why you are a certain way) and an excuse (why you stay that way)

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Two Ways to Select Projects

- Top Down
Choose a project because it contributes to a major business goal
- Pick the Best
Compare all projects and choose the ones that have the highest number score (e.g., ROI)

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"Pick the Best" is Difficult

- ROI only works in theory
- Project interdependency causes problems when you approve a project but not its prerequisites
- Infrastructure improvement projects usually hard to justify
- Development estimates are usually wrong

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Project Success is Uncommon

- In 2008,
 - Only 32% of software projects were completed on time and within budget
 - 24% of software projects were abandoned
- In 1994,
 - 16% of software projects were completed on time and within budget
 - 31% of software projects were abandoned

Source: Standish Group studies, and 3/1/2007 *SD Times*

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Biggest Reasons for IT Project Failure (in my experience)

- Starting the wrong project
- Not including prerequisite steps
- Going for home runs instead of base hits
- Project duration greater than the job tenure of the sponsoring executive
- "Gathering" requirements instead of *negotiating* them
- Not enough contingency planning

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Once you've picked a project, how do you make it succeed?

- QCSS
- Simplicity

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QCSS – Critical to Project Success

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The variables have non-linear relationships

- Examples:
 - Having a baby
 - Painting a room

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The curves can reverse

# of people	Duration
5	6
10	5
15	4
20	5
25	8

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Example of real life non-linearity on a project

Peak Staff	Schedule (Months)	Cost (\$)	Defects Remaining
6	13.6	416,000	6
9	12.3	623,000	9
14	11.3	875,000	14
24	10.2	1,300,000	25
33	9.5	1,700,000	33
66	8.3	3,000,000	33

Source: The Software Genome Council
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Key Messages from QCSS

- Users must emphasize the QCSS variables that are most important, and accept the outcome on the other variables
- My own recommendation:
 - Do things with high quality in small steps
 - High quality
 - Small scope
 - Therefore short schedule and reasonable cost

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Simplicity - Another Key to Project Success

- There is a lot of complexity in IT
- But things are more complex than they have to be
- The complexity only increases the magic and wizardry of the IT organization, and does nothing for the customers

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Simplicity Recommendations 1

- Focus on making things simpler. Keep asking "Is there a simpler way?"
 - Sometimes the easiest techniques are the best
Example: paper mock-ups of computer screens used for user prototyping
- Follow the 80-20 rule in systems design

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Simplicity Recommendations 2

- Keep project and system scope in check
 - Scope hard to relate to "common sense" - sometimes small scope change can have huge impact on the project
 - Building design example: moving a bathroom
- If you have to increase scope in one area, try to find another area to decrease

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Simplicity Recommendations 3

- Build systems in layers, with standardized interfaces between the layers
 - Makes technology upgrading easier
 - Makes system-to-system integration much easier

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Maintenance

- Like farming: uncultivated fields don't need maintenance, but once you add more cultivated land, you have to spend effort every year to keep it up

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Projects Decline over Time as a Percent of Total IT Budget

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Hardware Maintenance

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Software Maintenance

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Do we expect this sports car 

To be capable of transforming into this van if our business requirements change? 

Not for hardware,
But people expect that for company software!

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Strategy

- The element of IT most often forgotten
- Think of systems as buildings, and strategy as city planning
- IT Strategy is what differentiates average IT from great IT

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Why is IT Strategy so Important?

- Because IT People are Focused on the *How* – not the *What*
- So most IT errors are caused by doing the wrong things, not by doing things wrong

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What does an IT strategy look like?

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    graph LR
      BO[Business Objectives] --> IPR[IT Plan or Roadmap]
      IPP[IT Policies & Principles] --> IPR
      IS[IT Standards] --> IPR
      IS --> TA[Technology Architecture]
      TA --> IPR
    
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Recap

- Magic in IT isn't a Good Thing
- Without Trust, IT is Useless
- The Four Biggest IT Infrastructure Secrets
- Why ROI Isn't the Best IT Project Selection Method
- The Six Biggest Reasons for IT Project Failure
- QCSS & Simplicity to focus your project efforts
- Software Maintenance isn't Like Other Maintenance
- The Five Key Components of an IT Strategy

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Q & A

- For more on the material in this presentation, see my book, available on Amazon.com and on Amazon's Kindle wireless reading device
- For additional information (including book lists and white papers) and for a free subscription to my monthly email newsletter, visit www.makingITclear.com
- Additional questions or inquiries to: Harwell Thrasher harwell@makingITclear.com

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